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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,371	02/06/2004	Keiji Ohbayashi	02126D/HG	9785
1933	7590	04/25/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC			PARKER, FREDERICK JOHN	
767 THIRD AVENUE			ART UNIT	
25TH FLOOR			PAPER NUMBER	
NEW YORK, NY 10017-2023			1762	

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/773,371

Applicant(s)

OHBAYASHI ET AL.

Examiner

Frederick J. Parker

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/085,566.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/6/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/085566, filed on 2/27/02. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### *Specification*

3. The disclosure is objected to because of the following informalities: page 1, top, please update the status of parent 10/085566. Appropriate correction is required.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. **Applicants are reminded of the duty to provide page/ line citations in support of ALL amendments to the claims in any Response.**

### *Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1762

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 20,25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 20,25 are vague and indefinite because it does not present a proper, interpretable formula to be satisfied. For examination, it will be assumed that any anticipated or obvious process meets the limitations if the prior art provide a similar product and process of making.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 17,21,26,29 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al US 5612281.

Kobayashi et al teaches forming ink jet recording sheets formed by applying a coating composition of water or other solvent, inorganic particles, and hydrophilic resin binder (PVC, MC, etc) onto a support and drying over a period of constant temperature as described on col. 9, 41-47; col. 12, 2-5; col. 15, 50-52. Since drying is for a specific time period at a given temperature , after that time the onset of cooling beings a period of falling drying rate, to form a colorant receptive layer. The layer is then treated with a solution comprising a silan (sic)

Art Unit: 1762

coupling agent additive. The agent reduces bleeding or blooming of subsequently applied ink per claim 29. The forming of the receptive layer coating solution includes adjusting pH to 4.5 (per claim 31) and may include an anti-static agent (a "surface active agent" since it changes surface activity) per claim 26.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 17,21,23 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichinose et al US 6685999.

Ichinose et al teaches making a coated recording medium for inkjet printing by coating a substrate with a formulation comprising inorganic particles and hydrophilic binder. The sheet substrate may be a polyethylene (= olefin) coated paper, per claim 23. The coating is dried at or above 100C to evaporate the alcohol and/or water solvents (col. 13, 41-50; col. 18, 6-15), which ultimately inherently requires cooling at a falling rate. Subsequently a liquid ink comprising colorant additives is applied by printing, and the colorants are absorbed by the inorganic constituents of the layer, meeting (c) of claim 17.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 18-20,22,27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al or Ichinose et al.

Kobayashi et al and Ichinose et al are cited for the same reasons previously discussed, which are incorporated herein. Per claim 18, the incorporation of a solution comprising an additive at or just before a drying point is simply a matter of choice which would not have been expected to produce any difference in outcome, absent a clear and convincing showing to the contrary, since further drying of the agent solution is required. As to claim 19, applying the ink receptive coating followed by the agent-containing solution in the same coating line, or in separated sequential coating lines would have been expected to provide equivalent results, absent a clear and convincing showing to the contrary, and therefore does not involve inventiveness over the prior art, In re Tatincloux 108 USPQ 125. As to claim 20, since the meaning of the formula is

Art Unit: 1762

uncertain, and the processes of the independent claim is anticipated by both Kobayashi et al and Ichinose et al, it would have been reasonable to expect the references also meet the limitations of claim 20. Per claim 22, winding of the coated sheet prior to drying would have been an obvious manufacturing step, dependant upon the logistics of the process, since there would not have been expected to be any difference in outcome whether the sheet is rolled or not rolled. The viscosity of the solution coating agent is not stated, nor limited; however, one of ordinary skill would have optimized viscosity to provide a desired degree of distribution of the agent in the ink receptive layer per claim 27.

15. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Patterson et al US 4732786.

Kobayashi et al is cited for the same reasons previously discussed, which are incorporated herein. Applying a solution comprising a polyvalent metal additive is not disclosed.

Kobayashi et al forms an ink jet receptive layer on a sheet. Patterson et al teaches on col. 2, 66 to col. 3, 41 to form a similar hydrophilic resin-based formulation to which is added a polyvalent metal complexing agent to cause immobilization of the polymer. The criticality of controlling pH is discussed on col. 3, 15-43, including maintaining a pH of about 5-8.5, overlapping claims 31-32. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the pH ranges disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. The polyvalent metal solution can be mixed with

Art Unit: 1762

the formulation OR separately applied at any time during the coating process, encompassing after application and drying of the polymer coating.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kobayashi by incorporating the polyvalent metal solution of Patterson et al to the applied polymer film to provide complexing of the polymer to form the ink receptive layer.

16. Claims 23-25,28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Saito US 6197381.

Kobayashi et al is cited for the same reasons previously discussed, which are incorporated herein. A polyolefin resin paper substrate is not disclosed.

Saito teaches forming an ink receptive layer comprising binder and inorganic particles on a sheet substrate, and includes applying a hardener coating composition to the dried, ink-receptive coating (col. 7, 1-8). The sheet substrate includes a polyolefin coated paper (col. 1, 59-63).

As to claim 25, since the meaning of the formula is uncertain, and the processes of the independent claim is anticipated by both Kobayashi et al and Ichinose et al, it would have been reasonable to expect the references also meet the limitations of claim 25.

The maximum water content of the paper is not stated nor limited, and therefore is inclusive of claim 24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kobayashi et al by utilizing the substrates and hardener



Art Unit: 1762

application of the similar method of Saito because of the expectation of successfully forming an ink receptive sheet for ink jet printing.

### ***Double Patenting***

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

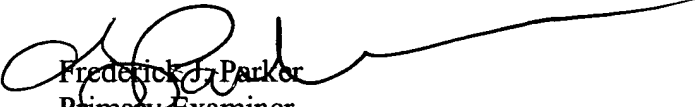
18. Claims 17,28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17,20 of U.S. Patent No. 6582802. Although the conflicting claims are not identical, they are not patentably distinct from each other because while both form the same ink receiving layer and drying, the instant application incorporates an additive solution which can include a hardener, whereas '802 simply cites a hardener, the hardener solution form being merely an obvious choice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

Art Unit: 1762

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Frederick J. Parker  
Primary Examiner  
Art Unit 1762

fjp